

National Climatic Data Center

DATA DOCUMENTATION

FOR

DATA SET 6221 (DSI-6221)

Monthly Aerological Data Set Subset / SHORT MONADS

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National Climatic Data Center
151 Patton Ave.
Asheville, NC 28801-5001 USA

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1. **Abstract:** MONADS is a database comprised of monthly averaged values and calculated statistics from the radiosonde data in the [CARDS](#) database. This dataset consists of simple and ordered statistics, and includes averages, medians, and quartiles for geopotential height, temperature, humidity, and winds.

2. **Element Names and Definitions:**

Station Identifier: (NID) is 6-digit number comprised of the World Meteorological Organization number in positions 1 - 5 identifying the location where the data was observed that was used to compute the statistics in this data set. The sixth digit specifies the type station and is identified in the TDF63 CARDS data format document.

Year: (NYEAR) is 4-digit number that represents the year during which data was observed.

Month: (MON) is 2-digit number that represents the month during which the data was observed.

Observation time: (NTIME) is 2-digit number that represents the hour when data was observed.

Level type: (LTYPE) is 2-digit coded number that indicates the level in the earth's atmosphere where the data values were observed.

26	Tropopause level
31	Surface level
32	Mandatory pressure level

Pressure at level: (NPRES) is 5-digit number that is mean atmospheric pressure (0.1 mb) for level types 26 and 31, and is pressure at one of the mandatory levels for level type 32.

Mean geopotential height/Mean pressure: (MEANHT) is 5-digit number that represents mean computed height in meters for mandatory pressure level or mean pressure (0.1 mb) for surface or tropopause level.

Standard deviation from mean height/pressure: (MHTSTD) is 5-digit number representing the standard deviation (m) from the mean height of a mandatory pressure level or the standard deviation (0.1 mb) from the mean pressure at the surface and tropopause levels.

Number of observations used to compute height/pressure statistics: (NUMHT) is 2-digit number that represents the total number of observations used to compute the height/pressure statistics.

The above defined statistics are repeated for the other elements. The following record format definition details those elements:

MONADS -MONTHly Aerological Data Set (Simple and Order Statistics)

1	-	6	WMO number
7	-	10	Year
11	-	12	Month
13	-	14	Observation time
15	-	16	Level type (26=Tropopause, 31=Surface, 32=Mandatory Level)

:
:

3:

17 - 21 Pressure at level (0.1 mb)
 22 - 33 Geopotential height stats in whole meters for level type 32
 Pressure stats to 0.1 mb for levels 26 and 31
 22 - 26 Mean value
 27 - 31 Standard deviation
 32 - 33 Number observations used to compute height/pressure statistics
 34 - 42 Temperature statistics to 0.1C
 34 - 37 Mean value
 38 - 40 Standard deviation
 41 - 42 Number observations used to compute temperature statistics
 43 - 55 Specific Humidity statistics to 0.001 g/kg
 43 - 48 Mean value
 49 - 53 Standard deviation
 54 - 55 Number observations used to compute specific humidity statistics
 56 - 77 Wind statistics to 0.1 mps
 56 - 67 Zonal wind statistics
 56 - 60 Mean value
 61 - 64 Standard deviation
 65 - 66 Number observations used to compute zonal wind statistics
 67 - 77 Meridional wind statistics
 67 - 71 Mean value
 72 - 75 Standard deviation
 76 - 77 Number observations used to compute meridional wind statistics

**** Note: Divisor N vice N-1 was used in computing standard deviations.

Decimals are implied. All 9's (negative or positive) in a data field represent missing data except for dew point statistics where '09999' is used for missing data in all fields except standard deviation which has '999' for missing data.

3. **Start Date:** 19480101, but varies by station.

4. **Stop Date:** 19901231 but varies by station.

5. **Coverage:** Landmasses worldwide.

6. **How to Order Data:**

Ask NCDC's Climate Services about the cost of obtaining this data set.
 Phone: 828-271-4800
 FAX: 828-271-4876
 E-mail: NCDC.Orders@noaa.gov

7. **Archiving Data Center:**

National Climatic Data Center
 Federal Building
 151 Patton Avenue
 Asheville, NC 28801-5001
 Phone: (828) 271-4800.

8. **Technical Contact:**

National Climatic Data Center
 Federal Building

:
:

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Asheville, NC 28801-5001
Phone: (828) 271-4800.

9. **Known Uncorrected Problems:** Humidity variables were calculated based on the flag for dewpoint depression being set to data good. This excluded dewpoint depression being calculated from relative humidity. Hence, many stations do not have a value for specific humidity.

10. **Quality Statement:** The data in MONADS are based on data that have been processed by the Complex Quality Control system and the data are flagged as good. Questionable and erroneous data are not used in the calculations.

11. **Essential Companion Datasets:** CARDS station metadata file available from the NCDC.

12. **References:**

Alduchov, O.A. and R.E. Eskridge, 1996: Complex quality control of upper-air variables (geopotential height, temperature, wind, and humidity) at mandatory and significant levels for the CARDS dataset. National Climatic Data Center publication, NTIS No. PB97-132286, 126pp.